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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.		
10/786,281	02/25/2004	Mahendra Ladharam Joshi	. 06332D USA	2433		
23543 AIR PRODUC	7590 11/15/2007 TS AND CHEMICALS, INC.		EXAM	EXAMINER		
PATENT DEP	ARTMENT		HOGAN, JAMES SEAN			
7201 HAMILTON BOULEVARD ALLENTOWN, PA 181951501			ART UNIT	PAPER NUMBER		
			3752			
			MAIL DATE	DELIVERY MODE		
			11/15/2007	PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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	Application	ı No.	Applicant(s)		
,	10/786,281		JOSHI, MAHENDF	RA LADHARAM	
Office Action Summary	Examiner		Art Unit		
·	James S. H	ogan	3752		
The MAILING DATE of this communication Period for Reply	appears on the	cover sheet with the c	orrespondence ad	dress	
A SHORTENED STATUTORY PERIOD FOR REI WHICHEVER IS LONGER, FROM THE MAILING - Extensions of time may be available under the provisions of 37 CFR after SIX (6) MONTHS from the mailing date of this communication If NO period for reply is specified above, the maximum statutory per - Failure to reply within the set or extended period for reply will, by sta Any reply received by the Office later than three months after the may earned patent term adjustment. See 37 CFR 1.704(b).	S DATE OF THI R 1.136(a). In no ever riod will apply and will atute, cause the applic	S COMMUNICATION t, however, may a reply be time expire SIX (6) MONTHS from ation to become ABANDONE	N. nely filed the mailing date of this co D (35 U.S.C. § 133).		
Status					
1) Responsive to communication(s) filed on 27	7 September 20	<u>107</u> .			
2a) This action is FINAL . 2b) ⊠ T	his action is no	n-final.			
3) Since this application is in condition for allow	wance except f	or formal matters, pro	secution as to the	merits is	
closed in accordance with the practice unde	er Ex parte Qua	yle, 1935 C.D. 11, 45	53 O.G. 213.		
Disposition of Claims					
4) Claim(s) 1-14 is/are pending in the application 4a) Of the above claim(s) 2,7,8 and 14 is/are 5) Claim(s) is/are allowed. 6) Claim(s) 1,3-6,9-13 is/are rejected. 7) Claim(s) is/are objected to. 8) Claim(s) are subject to restriction and	e withdrawn fro				
Application Papers					
9) The specification is objected to by the Exam 10) The drawing(s) filed on is/are: a) a Applicant may not request that any objection to t Replacement drawing sheet(s) including the coru	accepted or b)[the drawing(s) be rection is require	held in abeyance. Seed if the drawing(s) is obj	e 37 CFR 1.85(a). lected to. See 37 CF	• •	
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Priority under 35 U.S.C. § 119 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of: 1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No. 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received.					
Attachment(s) 1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date	:	1) Interview Summary Paper No(s)/Mail Da 5) Notice of Informal P 6) Other:	ite		
U.S. Patent and Trademark Office PTOL-326 (Rev. 08-06) Office	e Action Summary	,	Part of Paper No	./Mail Date 2	

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DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1-14 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,3, 8 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,098,896 to Haruch.

Regarding claim 1, Haruch discloses a nozzle body inlet face (at 26), an outlet face (at 22), and an inlet flow axis passing through the inlet and outlet face (imagined), the nozzle having slots (25, 25') going through the nozzle body, parts of the slots (26, 28) having slot axis (imagined) that are not parallel to the inlet flow axis of the body (see Figure 3). As per claim 3, the slots (25') are not parallel to each other. As per the later part of claim 8, none of the slots intersect other slots. As per claim 9, Haruch discloses none of the slots intersecting other slots, as well as a slot (25') that intersects the inlet flow axis (imagined).

Claim 10-12 is rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,664,733 to Lott.

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As per claim 10, Lott discloses nozzle body inlet face (at 74), an outlet face (at 24), and an inlet flow axis passing through the inlet and outlet face (imagined), the nozzle having slots (50) going through the nozzle body, each slot having an axis (imaginary) wherein a first slot (any, shown in Figure 4) is intersected by each of the other slots and the slot center plane of any of the slots intersects the flow axis of the nozzle body. As per claims 11-12, Merriam-Webster Online defines intersect as: 1: to meet and cross at a point, or 2: to share a common area: overlap. By definition then, the center planes of any of the slots meet and cross the inflow axis at an angle of 0°.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,098,896 to Haruch in view of U.S. Patent No. 5,664,733 to Lott.

The rejection of claim 1 above serves as the basis for the following. As per claim 4, Haruch does not teach intersecting slots. Lott teaches nozzle slots (50) that intersect eat other, wherein one of the slots is intersected by each of the slots, and where a first and second as well as third and forth slot intersect each other. It would have been obvious to one having ordinary skill in the art at the time the invention was made to

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have modified the nozzle slot geometry of Haruch with the intersecting nozzle slot geometry as taught by Lott in order to customize a spraying pattern.

Claims 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,664,733 to Lott.

The rejection of claim 10 above serves as the basis for the following. Lott does not teach slot intersecting at an angle of 0 and 15 degrees, however it would have been obvious to one having ordinary skill in the art at the time the invention was made to have duplicated the nozzle pattern of Lott in an axial direction to produce intersecting nozzles that would have an included angle of 0 and 15 degrees, intersecting at the inlet face of the nozzle body, as doing so would only requite a duplication of parts, in this case nozzle orifices, and it would have been obvious to one having ordinary skill in the art at the time the invention was made to have increased the number of nozzle orifices, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. See *St. Regis paper Co. v. Bemis Co.*, 193 USPQ 8.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure is as follows:

- U.S. Patent No. 6,315,221 to Goenka et al
- U.S. Patent No. 6,126,087 to Hedger et al

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to James S. Hogan whose telephone number is (571) 272-4902. The examiner can normally be reached on Mon-Fri, 7:00a-4:00p EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin P. Shaver can be reached on (571) 272-4720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JSH 11/2/2007

DINH Q. NGUYEN PRIMARY EXAMINER